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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,275	03/17/2004	Michael Peter Cooke	DP-303889	4229

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EXAMINER
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KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/802,275	<b>Applicant(s)</b> COOKE, MICHAEL PETER	
	<b>Examiner</b> Christopher S. Kim	<b>Art Unit</b> 3752	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 26-31 is/are pending in the application.
- 4a) Of the above claim(s) 28 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26, 27, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/907,011.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Invention I in the reply filed on November 21, 2005 is acknowledged.
2. Claims 28 and 31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 21, 2005.

### ***Response to Amendment***

3. The response filed August 22, 2005 is acknowledged.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 26, 27, 29 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 26 recites "...the hydraulic amplifier including a mechanical coupler for coupling the valve member and the piston member..." Paragraph 0044 of the specification discloses, "The spring 50 provides a direct mechanical coupling between the piston member 34 and the valve needle 12." There is no disclosure that the hydraulic amplifier includes the spring 50.

7. Claims 26, 27, 29, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites "a valve member" and "a piston" which appear to be double inclusions of the "hydraulic amplifier arrangement," i.e., the "valve member" and the "piston" appear to be sub elements of the hydraulic amplifier arrangement. Paragraph 0045 defines that the "piston member 34 and the control chamber 62 provide an amplifier arrangement..." It also defines that the "bore 35 provided in the piston member 34 defines, together with the end surface of the region 12a of the valve needle 12 and a blind drilling 60 provided in the valve needle 12, a control chamber 62 for fuel." Paragraph 0054 further recites, "During this second stage of operation, movement of the valve needle 12 is governed by hydraulic amplification of movement of the stack 28 provided by the piston member 34 and the control chamber 62." Yet, applicant argues that the hydraulic amplifier includes a hydraulic circuit for moving the valve member hydraulically relative to the piston member. It is uncertain what constitutes a "hydraulic amplifier arrangement." Similarly, claim 29 recites "an actuator-hydraulic amplifier

combination" in line 10. It appears to be a double inclusion of the "valve member" recited in line 3 and the "piston member" recited in line 4. It is uncertain what constitutes an "actuator-hydraulic amplifier combination."

Claim 26 recites the limitation "the hydraulic amplifier" in line 10. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Boecking (WO 00/11339).

Boecking discloses a fuel injector comprising: a valve member 6; a piston member 3; an actuator arrangement (valve actuation unit, column 5, line 9); a mechanical coupler 12.

Boecking discloses an initial retracting force (S max) and a second retracting force (S small).

Even if applicant believes that Boecking fails to disclose the functional recitation "...mechanically coupled by the hydraulic amplifier arrangement during application of the initial retracting force and decoupled from one another during application of the second retracting force," the functional recitation considered to the extent that it merely requires the ability to so perform. It is suggested that the functional recitation be expressed as a "means" for performing a specified function, as set forth in 35 U.S.C. 112, 6<sup>th</sup> paragraph, in order to be given patentable weight.

9. Claims 26, 27, 29 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Lambert (6,513,733)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Lambert discloses a fuel injector comprising: a valve member 20; a hydraulic amplifier arrangement coupled to the valve member 20 via a piston member 12 and a control chamber 15; an actuator arrangement (piezoelectric actuator arrangement, column 3, lines 49-52); the hydraulic amplifier including a mechanical coupler 27. See column, 5, lines 16-19, wherein Lambert discloses that lifting of piston member 12 is aided by fuel pressure. Such would also be inherent in lifting valve member 20.

### ***Double Patenting***

10. Claims 26, 27, 29 and 30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,776,354. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of '354 fully discloses the instant claimed subject matter.

***Response to Arguments***

11. Applicant's arguments filed August 22, 2005 have been fully considered but they are not persuasive. Applicant argues that the obviousness-type double patenting rejection is improper because the current application is a divisional of the '011 application which contained a Restriction Requirement. The '011 application had an election requirement. Applicant elected the Species A, figures 1-2. The current application appears to contain only generic claims.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

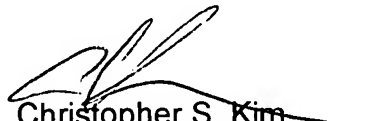
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3752

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher S. Kim  
Primary Examiner  
Art Unit 3752

CK